

WHAT IS CLAIMED IS:

1. A copper-based sliding material comprising sintered copper or sintered copper alloy, and 0.1 to 5 vol.% hard substance particles harder in hardness than said copper or copper alloy, said hard substance particles being substantially evenly dispersed in said copper or copper alloy so that, when at least one, randomly selected surface portion or sectional portion of said sintered copper or sintered copper alloy is partitioned into squares each having a side of 20 μm , at least one of the particles exists in each of squares not less than 80% of the whole squares.
2. A method of producing a copper-based sliding material according to claim 1, comprising the steps of treating copper or copper alloy powder and hard substance powder harder in hardness than said copper or copper alloy through mechanical alloying process so that composite powder is prepared in which hard substance particles of said hard substance powder is substantially evenly dispersed in each particle of said copper or copper alloy powder, and sintering said powder mixture.
3. A sliding bearing material comprising a back metal, and a layer of a copper-based sliding material according to claim 1 which is bonded onto said back metal.
4. A sliding bearing material having a three-layers structure, said sliding bearing material

comprising a back metal, an intermediate layer made of copper or copper alloy which layer is bonded to the back metal, and a layer of a copper-based sliding material according to claim 1 which is bonded onto said intermediate layer, said copper-based sliding material layer which is an uppermost layer being provided with a thickness not less than 0.05 mm.

5. A method of producing a sliding bearing material according to claim 4, comprising the steps of treating both of copper or copper alloy powder and hard substance powder harder in hardness than said copper or said copper alloy through mechanical alloying process so that composite powder is prepared in which hard substance particles of said hard substance powder is substantially evenly dispersed in each particle of said copper or copper alloy powder, providing said intermediate layer on said back metal by plating of said copper or copper alloy and/or by spreading powder of copper or copper alloy powder onto said back metal, and spreading and sintering said composite powder on said intermediate layer.